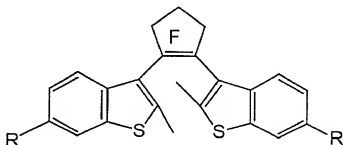


## I CLAIM :

1/ A secure, optically readable data medium comprising a data-carrying zone that is readable by a read light beam, and at least a portion that is photosensitive, being provided with a photosensitive material and exposed to the read light beam, the photosensitive material presenting at least one optical property that can be modified by the read light beam, wherein the photosensitive material contains an active compound taken from the diarylethene family.

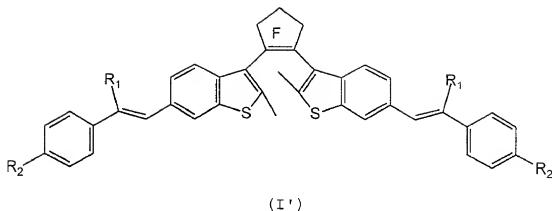
2/ A data medium according to claim 1, in which the compound from the family of diarylethenes is a substituted or non-substituted compound having the following general formula:



(I)

in which R represents a substituted or non-substituted styryl radical.

3/ A data medium according to claim 2, in which the compound from the family of diarylethenes is a substituted or non-substituted compound having the following general formula:



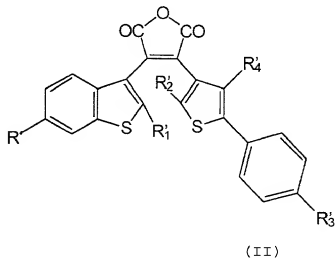
in which:

- 5         $R_1$  and  $R_2$  are each selected independently of each other from: a hydrogen atom; a C1 to C6 alkyl group; and a C1 to C6 alkoxy group.

- 4/ A data medium according to claim 3, in which  $R_1$   
10        represents a hydrogen atom and  $R_2$  represents  $-O-CH_3$ .

- 5/ A data medium according to claim 3, in which  $R_1$   
represents  $CH_3$  and  $R_2$  represents a hydrogen atom.

- 15      6/ A data medium according to claim 1, in which the compound from the family of diarylethenes is a substituted or non-substituted compound having the following general formula:



in which each of  $R'$ ,  $R'_1$ ,  $R'_2$ ,  $R'_3$ , and  $R'_4$  is selected independently of one another from: a hydrogen atom; an alkyl group; and an alkoxy group.

5 7/ A data medium according to claim 6, in which  $R'$  represent a hydrogen atom,  $R'_1$  represents  $-O-CH_3$ ,  $R'_2$  and  $R'_4$  represents  $CH_3$ , and  $R'_3$  represents  $-O-CH_3$ .

10 8/ A data medium according to claim 1, constituting an optical disk.

9/ A data medium according to claim 8, selected from CD-ROMs and DVDs.

15 10/ A data medium according to claim 1, having a data zone which includes at least part of said photosensitive portion.

20 11/ A data medium according to claim 1, comprising a transparent matrix having a data-carrying face on which said photosensitive material is deposited in the form of a fine layer, the layer of photosensitive material and the data-carrying face of the matrix being covered in a reflecting layer of metallization.

25 12/ A data medium according to claim 1, in which the photosensitive material is in the form of a layer of thickness lying in the range  $0.2\text{ }\mu\text{m}$  to  $60\text{ }\mu\text{m}$ .

30 13/ A data medium according to claim 1, in which the photosensitive material also comprises a solid transparent polymer having the active compound of said photosensitive material mixed therein.

35 14/ A data medium according to claim 13, in which the active compound is at a concentration of 10% to 30% by weight relative to the transparent polymer.



- photosensitive, being provided with a photosensitive material and exposed to the read light beam, the photosensitive material presenting at least one optical property that can be modified by the read light beam, the
- 5 photosensitive material containing an active compound taken from the diarylethenes family,
- said process comprising at least a first step in which the data medium is read by said read light beam, and a second step in which one checks that said at least one
- 10 optical property of the photosensitive material was modified during said first step.

2025 RELEASE UNDER E.O. 14176